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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,397	02/18/2004	Claude R. Mallet	60505CIP2(49991)	4351
21874	7590	04/24/2006	EXAMINER	
EDWARDS & ANGELL, LLP P.O. BOX 55874 BOSTON, MA 02205			THERKORN, ERNEST G	
			ART UNIT	PAPER NUMBER
			1723	
DATE MAILED: 04/24/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/782,397

Applicant(s)

MALLET ET AL.

Examiner

Ernest G. Therkorn

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-10, 28-30, 50, 55-58, 60, 62, 64-67 and 69 is/are pending in the application.
- 4a) Of the above claim(s) 28-30, 50, 55-57, 62, 64 and 65 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 58, 60, 66, 67, and 69 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 1723

Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. "haolalkyl" would appear to be a misspelled word.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10, 58, 60, 66, 67, and 69 are rejected under 35 U.S.C. 102(B) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Takahashi (E.P. 1,159,995). The claims are considered to read on Takahashi (E.P. 1,159,995). However, if a difference exists between the claims and Takahashi (E.P. 1,159,995), it would reside in optimizing the elements of Takahashi (E.P. 1,159,995). It would have been obvious to optimize the elements of Takahashi (E.P. 1,159,995) to enhance separation.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi (E.P. 1,159,995) as applied to claims 1-10, 58, 60, 66, 67, and 69 above, and further in view of Hofstee (U.S. Patent No. 4,000,098) and Unger, Chromatographic Science Series, 47:585-720 (1990). At best, the claim differs from Takahashi (E.P.

Art Unit: 1723

1,159,995) in reciting an electron withdrawing group such as benzylamine. Hofstee (U.S. Patent No. 4,000,098) (column 3, lines 38-64) discloses that benzylamine is interchangeable with secondary amines. Unger, Chromatographic Science Series, 47:585-720 (1990) discloses that aromatic amines are anion exchangers. It would have been obvious to use benzylamine in Takahashi (E.P. 1,159,995) because Hofstee (U.S. Patent No. 4,000,098) (column 3, lines 38-64) discloses that benzylamine is interchangeable with secondary amines and because Unger, Chromatographic Science Series, 47:585-720 (1990) discloses that aromatic amines are anion exchangers.

Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi (E.P. 1,159,995) as applied to claims 1-10, 58, 60, 66, 67, and 69 above, and further in view of Unger, Chromatographic Science Series, 47:585-720 (1990). At best, the claims differ Takahashi (E.P. 1,159,995) in reciting reaction with a haloalkyl. Unger, Chromatographic Science Series, 47:585-720 (1990) (pages 602-603) discloses chloromethylating a polymer and reaction with ammonia, a primary amine, or a secondary amine is one way of forming an anion exchanger. It would have been obvious to react with a haloalkyl in Takahashi (E.P. 1,159,995) because Unger, Chromatographic Science Series, 47:585-720 (1990) (pages 602-603) discloses chloromethylating a polymer and reaction with ammonia, a primary amine, or a secondary amine is one way of forming an anion exchanger.

Claims 1-10, 58, 60, 66, 67, and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over each of Lee (U.S. Patent No. 6,322,695), Lee (WO 99/64480), and Takahashi (E.P. 1,159,995) in view of either Fritz (U.S. Patent No. 5,618,438) or

Art Unit: 1723

Takahashi (E.P. 1,159,995). At best, the claims differ from each of Lee (U.S. Patent No. 6,322,695), Lee (WO 99/64480), and Takahashi (E.P. 1,159,995) in reciting use of the recited amines. Fritz (U.S. Patent No. 5,618,438) (column 2, lines 10-11 column 5, line 55-column 6, line 3) discloses that secondary amines are an alternative to sulfonates as a functionalizing agent for divinylbenzene particles used for solid phase extraction. Takahashi (E.P. 1,159,995) (page 4, lines 45-55) discloses that secondary amines are an alternative to hydrophobic/hydrophilic copolymers for solid phase extraction. It would have been to use secondary amines in each of Lee (U.S. Patent No. 6,322,695), Lee (WO 99/64480), and Takahashi (E.P. 1,159,995) either because Fritz (U.S. Patent No. 5,618,438) (column 2, lines 10-11 column 5, line 55-column 6, line 3) discloses that secondary amines are an alternative to sulfonates as a functionalizing agent for divinylbenzene particles used for solid phase extraction or because Takahashi (E.P. 1,159,995) (page 4, lines 45-55) discloses that secondary amines are an alternative to hydrophobic/hydrophilic copolymers for solid phase extraction.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over each of Lee (U.S. Patent No. 6,322,695), Lee (WO 99/64480), and Takahashi (E.P. 1,159,995) in view of either Fritz (U.S. Patent No. 5,618,438) or Takahashi (E.P. 1,159,995) as applied to claims 1-10, 58, 60, 66, 67, and 69 above, and further in view of Hofstee (U.S. Patent No. 4,000,098) and Unger, *Chromatographic Science Series*, 47:585-720 (1990). At best, the claim differs from each of Lee (U.S. Patent No. 6,322,695), Lee (WO 99/64480), and Takahashi (E.P. 1,159,995) in view of either Fritz (U.S. Patent No.

Art Unit: 1723

5,618,438) or Takahashi (E.P. 1,159,995) in reciting an electron withdrawing group such as benzylamine. Hofstee (U.S. Patent No. 4,000,098) (column 3, lines 38-64) discloses that benzylamine is interchangeable with secondary amines. Unger, Chromatographic Science Series, 47:585-720 (1990) discloses that aromatic amines are anion exchangers. It would have been obvious to use benzylamine in each of Lee (U.S. Patent No. 6,322,695), Lee (WO 99/64480), and Takahashi (E.P. 1,159,995) in view of either Fritz (U.S. Patent No. 5,618,438) or Takahashi (E.P. 1,159,995) because Hofstee (U.S. Patent No. 4,000,098) (column 3, lines 38-64) discloses that benzylamine is interchangeable with secondary amines and Unger, Chromatographic Science Series, 47:585-720 (1990) discloses that aromatic amines are anion exchangers.

Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over each of Lee (U.S. Patent No. 6,322,695), Lee (WO 99/64480), and Takahashi (E.P. 1,159,995) in view of either Fritz (U.S. Patent No. 5,618,438) or Takahashi (E.P. 1,159,995) as applied to claims 1-10, 58, 60, 66, 67, and 69 above, and further in view of Unger, Chromatographic Science Series, 47:585-720 (1990). At best, the claims differ from each of Lee (U.S. Patent No. 6,322,695), Lee (WO 99/64480), and Takahashi (E.P. 1,159,995) in view of either Fritz (U.S. Patent No. 5,618,438) or Takahashi (E.P. 1,159,995) in reciting reaction with a haloalkyl. Unger, Chromatographic Science Series, 47:585-720 (1990) (pages 602-603) discloses chloromethylating a polymer and reaction with ammonia, a primary amine, or a secondary amine is one way of forming an anion exchanger. It would have been obvious to react with a haloalkyl in each of Lee (U.S. Patent No. 6,322,695), Lee (WO

Art Unit: 1723

99/64480), and Takahashi (E.P. 1,159,995) in view of either Fritz (U.S. Patent No. 5,618,438) or Takahashi (E.P. 1,159,995) because Unger, Chromatographic Science Series, 47:585-720 (1990) (pages 602-603) discloses chloromethylating a polymer and reaction with ammonia, a primary amine, or a secondary amine is one way of forming an anion exchanger.

Claims 28, 30, 55-57, and 62 have been withdrawn as being drawn to non-elected species.

The remarks urge that examining the additional two inventions would not be a serious burden on the examiner. However, the additional searching and different issues of patentability would be an enormous burden on the examiner. As such, the restriction requirement and the election of species have been reconsidered, deemed proper, and made final for the reasons of record.

Any inquiry concerning this communication should be directed to E. Therkorn at telephone number (571) 272-1149. The official fax number is 571-273-8300.

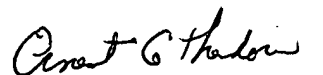
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Application/Control Number: 10/782,397

Page 7

Art Unit: 1723

Business Center (EBC) at 866-217-9197 (toll-free).



**Ernest G. Therkorn**  
**Primary Examiner**  
**Art Unit 1723**

EGT

April 20, 2006